

**Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings of claims in the application:

**Listing of Claims:**

1.-2. (Canceled).

3. (Currently Amended) A method for depositing a ~~protective~~ coating comprising a continuous ~~highly~~ tetrahedral amorphous carbon on a substrate, the method comprising:

ionizing a source material so as to form a plasma containing ions which comprise carbon; and

energizing the ions to form a stream having a substantially uniform impact energy and uniform weight from the plasma straight toward the substrate so that carbon from the ions is deposited on the substrate and ~~, wherein the ions impact with an energy~~ which promotes formation of more than 15%  $sp^3$  carbon-carbon bonds.

4. (Currently Amended) A method as in claim 3, wherein the carbon is deposited on the substrate at a rate higher than ~~about~~ 10 Å per second.

5. (Original) A method as in claim 3, wherein the source material comprises acetylene.

6. (Canceled).

7. (Currently Amended) A method for enhancing formation of an ion beam that provides carbon deposition over a substrate, the ion beam produced by inductively ionizing an acetylene plasma within a plasma volume and capacitatively coupling the plasma so as to form a stream of ions from within the plasma volume, the method comprising:

moving a magnetic field through the plasma volume to promote even resonant inductive ionization and homogenize the ion beam which deposits carbon over the substrate, wherein the magnetic field rotates with a frequency of less than 10,000 Hz.

8. (Previously Presented) A method as claimed in claim 7, wherein moving the magnetic field comprises selectively energizing magnetic coils disposed about the plasma volume.

9. (Currently Amended) A method as claimed in claim 7, wherein the magnetic field rotates through the plasma volume with a frequency which is much less than the frequency of an alternating induction potential within the plasma volume.

10. (Currently Amended) A method as claimed in claim 7, wherein the magnetic field is transverse and rotates about an axis which is substantially normal to a capacitatively coupled extraction grid within the plasma volume.

11. (Currently Amended) A method as claimed in claim 7, wherein the magnetic field rotates with a frequency of less than 100 ~~10,000~~ Hz.

12.-15. (Canceled).

16. (New) A method as in claim 3, wherein the ion impact energy is in a range between 100 eV and 120 eV for each carbon atom.

17. (New) A method as in claim 4, wherein the carbon is deposited on the substrate at a rate in a range from 30 Å per second to 100 Å per second.

18. (New) A method as in claim 7, wherein the carbon is deposited on the substrate at a rate in a range from 20 Å per second to 100 Å per second.

19. (New) A method as in claim 3, wherein the substrate includes a magnetic recording medium.

20. (New) A method as in claim 3, wherein the substrate includes a semiconductor material.

21. (New) A method as in claim 7, wherein the substrate includes a magnetic recording medium.

22. (New) A method as in claim 7, wherein the substrate includes a semiconductor material.